MNTI is a rare neoplasm that, when it occurs, often forms during the first year of life [3]. The tumor usually develops in the head and neck regions, particularly in the maxilla, followed by the skull, mandible and brain [3]. Despite their rapid local growth potential, MNTIs are generally classified as benign neoplasms.

Hyperostosis and osteogenesis with prominent spicules of bone on CT underscore a characteristic finding suggesting the diagnosis of MNTI [1]. In the current case, T1-weighted images revealed mildly high signal intensity, probably because melanin causes the T1-shortening effect. Differential diagnoses include Ewing’s sarcoma, osteosarcoma, eosinophilic granuloma, lymphoma, leukemia and metastasis from neuroblastoma [2]. Clinical information (such as patient’s age and multiplicity of lesions) as well as the radiological features can be helpful in the diagnosis. Knowledge of this rare entity, including its CT and MRI features, is important for making a proper diagnosis and providing appropriate treatment strategies for patients.

References


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Figure 1 Axial T1-weighted MRI showing a right subdural cerebellar heterogeneous collection.

Spontaneous chronic subdural hematoma of the posterior fossa

The posterior fossa is an unusual location for chronic subdural hematoma in adults without a history of trauma. The most common associated factor is coagulation abnormality. To our knowledge, fewer than 20 cases similar to ours have been reported in the literature [6]. We describe a post-surgical case diagnosed by MRI.

A 38-year-old woman was admitted to our department because of progressive, pronounced dizziness and headaches, without any previous history of head injury. Her relevant past medical history included systemic lupus and antiphospholipid syndrome. On admission, the patient was awake, alert, and complained of severe vertigo and was unable to walk unaided. The neurological examination revealed cerebellar signs and gait ataxia associated with bilateral papillary edema. Blood tests showed a spontaneous low prothrombin rate (45%).

The MRI study demonstrated a right subdural space-occupying collection at the convexity of the cerebellar hemisphere, with compression of the fourth ventricle. This collection was hyperintense and heterogeneous on both T1- and T2-weighted MRI sequences (Figs. 1-3).

After the coagulation profile was normalized, the patient underwent surgical evacuation of the hematoma through a suboccipital right craniectomy. Chocolate-colored fluid gushed out under pressure. No source of bleeding could be identified. The subdural space was rinsed...
with warm saline solution and no drain was placed because reexpansion of the cerebellum was good. An improvement of the patient’s clinical complaint was evident immediately after surgery. The dizziness resolved completely and gait ataxia disappeared. The postoperative course was uneventful, and the patient was discharged after 7 days.

Two months later, the patient developed acute intestinal bleeding and died in another institution from extraneural hemorrhagic complications.

Subdural chronic hematomas of the posterior fossa appear to be more frequent in children and in newborns [6]. The incidence of intracranial chronic subdural hematomas is 1 or 2 cases per 100,000 population per year [6]. Ciembrowicz found that only three of 535 intracranial subdural hematomas were located in the posterior fossa [2]. Including those associated with anticoagulation therapy, fewer than 20 cases similar to ours has so far been reported in the literature [2-6]. Acute subdural hematomas of the posterior cranial fossa are more frequently reported in the literature; most of them related to severe head injuries in children [3]. Other exceptional locations are described, responding to the same pathophysiological mechanism as supratentorial locations, such as retroclival or spinal subdural hematomas [1].

Usually, infratentorial subdural hematomas result from traumatic damage to the posterior fossa and injury of bridging veins [6]. Only 50% of patients report a traumatic event. Otherwise, a chronic subdural hematoma can be the result of transformation of an acute one. Other authors attribute these lesions to the rupture of an aneurysm or an arteriovenous malformation in the posterior fossa [6], or even to an intracranial hypotension syndrome [3]. It is well known that anticoagulation therapy or coagulation abnormalities are the principal risk factor for subdural bleeding [4].

In our case, bleeding should have been caused by injury to bridging veins within the posterior fossa, secondary to mild head trauma not noticed by the patient. Coagulation disturbances should also have increased the hematoma volume.

CT scanning is generally accurate and sufficiently sensitive in the diagnosis of supratentorial subdural hematomas, while MRI has clearly shown its superiority in the detection of subdural collections at unusual locations and particularly in the detailed analysis of the posterior cranial fossa. In this case, MRI should also help where any associated cerebellar tumor or AVM is suspected. Classically, MRI can evaluate the age of the bleeding through the signal on both T1 and T2 sequences: isoT1/hypoT2 in the acute stage, hyperT1/hypoT2, then hyperT2 in the subacute stage, as in our case, and hypoT1/hyperT2 for the late stage.

Therapeutic management is mainly surgical. Surgical drainage of the blood collection is similar to that for supratentorial chronic subdural hematomas, with, if necessary, correction of any coagulation disturbance. There are few reports regarding the conservative management of these lesions, but surgical evacuation offers a rapid and safe improvement.

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